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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,788	10/19/2001	Xiangfeng Dai	6075-A	6964

7590 11/25/2002
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EXAMINER

SPITZER, ROBERT H

ART UNIT PAPER NUMBER

1724

DATE MAILED: 11/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

A2-5

Office Action Summary

Application No.
10/037,788

Applicant(s)
Xiangfeng Dai et al.

Examiner
Robert H. Spitzer

Art Unit
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Oct. 19, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1724.
2. The drawing figures are objected to for the following reasons: on FIG. 2, there is no number 30a; on FIG. 3, there is no number 50b; and, on FIG. 5, there is no number 65d and no description of number 47d.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1-4,7,10,12, and 16-21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by both the process and structure of Mattia (4,231,764), wherein the components adsorbed on the sorbent are removed separately using different temperatures.
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 5,6,13-15 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattia (4,231,764) in view of Burkholder et al. (4,421,651). The claims differ from the disclosure of Mattia ('764) in the heating occurring through the use of either microwaves or infrared energy. Burkholder et al. ('651) show that microwave energy and a carrier gas can be used to remove adsorbed components (adsorbates) from an adsorbent material. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize microwave energy as the heat source in Mattia ('764), in view of the showing of Burkholder et al. ('651), as any known heating means for an adsorbent would be interchangeable as they all will provide the necessary temperatures for removal of such adsorbates. The same also applies to the use of infrared energy.

7. Claims 8, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattia ('764) in view of Mattia (3,455,089). The claims differ from the disclosure of Mattia ('764) in specifying that the sorbates are formaldehyde and terpenes (which are alcohols, i.e. glycols). Mattia ('089) shows that an adsorbent can be used to remove aldehydes and alcohols from a feed gas stream. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the process of Mattia ('764) would be useable for a feed gas stream including both formaldehyde and terpenes, in view of the showing of Mattia ('089), as such gases are also VOCs within the broad meaning of those gases.

8. The remaining references listed on the PTO-892 and those cited on the PTO-1449 show art of interest, with the check-marked reference having been cited in Applicants' specification.

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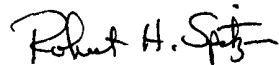
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H. Spitzer whose telephone number is (703) 308-3794. The examiner can normally be reached on Monday-Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Simmons, can be reached on (703) 308-1972. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 and (703) 872-9311 for After Final communications .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Robert H. Spitzer

October 30, 2002



ROBERT H. SPITZER
PRIMARY EXAMINER

T.C. 1700

October 30, 2002